



embiScan

HOW TO CONFIGURE THE EMBISCAN ?
UM-EMBISCANBARCODE-2.2_EN



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REVISION HISTORY

Rev	Date	Author	Description
1.0	21/05/2015	Tristan Finet	First draft
1.1	05/06/2015	Tristan Finet	Modification after internal approval and comments
2.0	20/07/2015	Tristan Finet	Add of the GTIN configuration (§4.16) Add of the keyboard QWERTZ (§4.2)
2.1	24/07/2015	Tristan Finet	Modification after internal approval and comments And §4.8 and 4.14 deleted → no more used
2.2	27/07/2015	Tristan Finet	Modification after last review
2.3	01/09/2015	Tristan Finet	Update of pictures

Laser Safety information

- Complies with 21CFR1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated July 26, 2001.
- EN60825-1:1994+ A1:2002 +A2:2001
- IEC60825-1:1993+A1:1997+A2:2001
- Class 1 Laser devices are not considered to be hazardous when used for their intended purpose



CAUTION

Use of controls, adjustments or performance of procedures other than those specified herein may result in hazardous laser light exposure.

Product Care

Your device is an electronic product that needs to be treated with care.

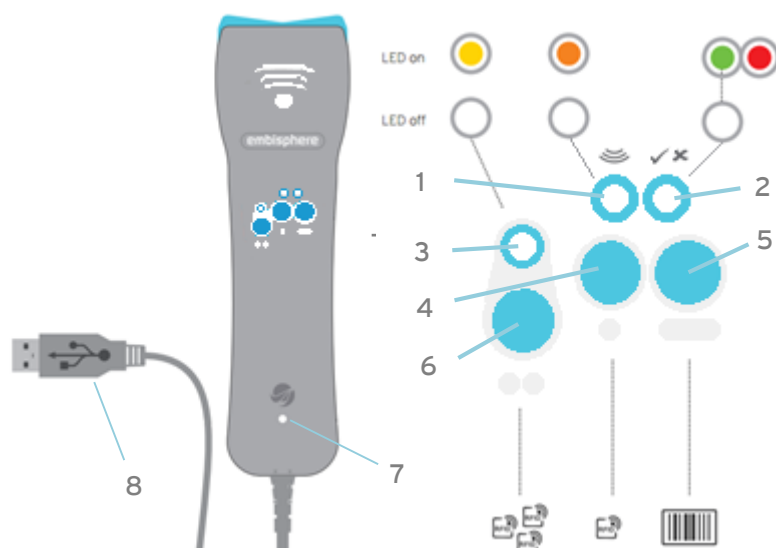
- Do not subject it to unnecessary shock or vibration.
- Keep your EmbiScan and its cable away from water, rain and excessively humid areas.
- Do not disassemble it. There are no user-serviceable parts inside. Opening will void your warranty.
- If your device is very cold or has been stored in a cold area, do not apply power to the device until it has been allowed to come to room temperature.
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1 Product description



#	Description	Function
1	Orange LED	RFID activity indicator light
2	Red/Green LED	Red - Error Green - Read confirmed
3	Yellow LED	RFID multiple mode indicator light.
4	Barcode Switch	To read barcode
5	RFID multiple mode switch	RFID multiple mode activation button
6	RFID single mode switch	RFID single mode activation button
7	Blue LED	Lights up when the product is ON
8	USB connector	USB cable interface for computer connection

2 Hardware configuration

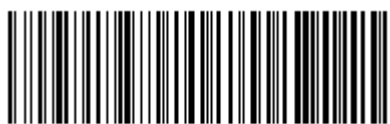
** Barcode must be used following an update of the embiScan firmware*

After an update of the embiScan, it's necessary to scan the Barcode which corresponding to the hardware used. While the hardware configuration is not done, the embiScan blinks in red with bip.

The hardware used can be known looking at the label located below the product.

If EMSCAN-A-EU scan **EMBISCAN_ANTENNA_BOARD_EU_HW06**

If EMSCAN-A-CN scan **EMBISCAN_ANTENNA_BOARD_CN_HW08**

EMBISCAN_MOTHER_BOARD_HW04	
EMBISCAN_ANTENNA_BOARD_EU_HW06	 EMBISCAN_HW_P1
EMBISCAN_ANTENNA_BOARD_CN_HW08	 EMBISCAN_HW_P2

3 Country configuration

** Barcode must be used following an update of the embiScan firmware*

Regarding of the country configuration, after the hardware configuration, you must scan the Barcode of the country where you use the embiScan. Without this configuration, the product emits fast bips and flashing in orange.

COUNTRY		BARCODE
UHF-PRC	CHINA	 EMBI_REGION_PRC
UHF-NA	NORTH AMERICA	 EMBI_REGION_NA
UHF-923	TAIWAN, BRAZIL, THAILAND	 EMBI_REGION_923
UHF-924	INDONESIA	 EMBI_REGION_924
UHF-KR2	SOUTH KOREA	 EMBI_REGION_KR2
UHF-TW12	TAIWAN (12 canal)	 EMBI_REGION_TW12
UHF-EU3	EUROPE, MADAGASCAR, SRILANKA, BANGLADESH, CAMBODIA, INDIA**, RUSSIA**, VIETNAM**, SINGAPORE**	 EMBI_REGION_EU3

4 Others configuration

The embiScan default value is « Locked ». It's means that some parameter can't be modified. For that, you need to unlocked the embiScan.

To easily locate this parameter, the locked functions are framed in red ; the unlocked functions are in blue :

RED BOXES	BLUE BOXES
<u>Locked functions</u> = parameter which required to unlock the embiScan for any modification.	<u>Unlocked functions</u> = parameter which can be scanned without unlocking the embiScan

4.1 Locking / unlocking

Scan following Barcode to lock or unlock the embiScan.

FUNCTIONS	BARCODE
UNLOCKING	 EMBISCAN_UNLOCKED
LOCKING	 EMBISCAN_LOCKED

4.2 Configuration of the keyboard

Following barcodes allow to configure the PC keyboard in AZERTY, QWERTY or QWERTZ mode.

FUNCTIONS	BARCODE
KEYBOARD AZERTY	 AZERTY
KEYBOARD QWERTY	 QWERTY
KEYBOARD QWERTZ	 QWERTZ

4.3 Comparison mode

The comparison mode allows to check if the barcode read have the same information than the tag information. This mode is automatically activated if the embiScan is connected to the socket.

FUNCTIONS	BARCODE
COMMON MODE	 NORMALE
COMPARISON MODE	 COMPARISON

4.4 Current configuration

The following barcode return the current configuration of the embiScan. This one is displayed on the PC Screen (see the user manual for more information on how to display information on the PC).

FUNCTION	BARCODE
CURRENT CONFIGURATION	 ACTUAL_CONFIG

4.5 Reset

The following barcode restore the embiScan factory settings

NB : after a reset, it's not necessary to configure the hardware & country.

FUNCTION	BARCODE
FACTORY SETTINGS	 RESET_USINE

4.6 Tag Encryption

The embisScan product can read the barcode data and write it (EAN data) in the tag memory (EPC bank).

For that, there is two way of use the embisScan :

- « Manual » encryption of the tag | in this mode, you must first scan the barcode and then, push the « RFID single read » button to write the EAN in the EPC bank of the tag.
- « Automatic » encryption of the tag | in this mode, you only need to scan a barcode and the embisScan will write it automatically the EAN read in the nearest tag

FUNCTIONS	BARCODE
MANUAL ENCRYPTION OF THE TAG	 EMBIWRITE_MANUAL
AUTOMATIC ENCRYPTION OF THE TAG	 EMBIWRITE_AUTOMATIC

4.7 Writing status

If you activate this option, the embisScan will return the status of writing (OK/NOK) by a ASCII text string.

FUNCTIONS	BARCODE
ACTIVATE THE STATUS OF ENCRYPTION	 EMBIWRITE_OP_STATUS_ON
DEACTIVATE THE STATUS OF ENCRYPTION	 EMBIWRITE_OP_STATUS_OFF

4.8 EPC company prefix

The following barcode let you choose the company prefix to use for the read/write in the tag memory bank. This settings depends of the GS1 declaration.

The default setting is the 6.

FUNCTIONS	BARCODE
COMPANY PREFIX 6	 COMPANY_PREFIX_6
COMPANY PREFIX 7	 COMPANY_PREFIX_7
COMPANY PREFIX 8	 COMPANY_PREFIX_8
COMPANY PREFIX 9	 COMPANY_PREFIX_9
COMPANY PREFIX 10	 COMPANY_PREFIX_10
COMPANY PREFIX 11	 COMPANY_PREFIX_11
COMPANY PREFIX 12	 COMPANY_PREFIX_12

4.9 Configuration of the sound

The following barcode let you choose to activate or not the sound of the embisScan..

FUNCTIONS	BARCODE
SOUND ACTIVATED	 EMBISOUNDON
SOUND NOT ACTIVATED	 EMBISOUNDOFF

4.10 Reading Mode

This mode give the possibility to read and return only one information:

- Barcode - EAN | only read the EAN from the scanned barcode
- Barcode - SERIAL NUMBER⁽¹⁾ | Allow to only read the serial number from the nearest tag.
- Tag - BANK EPC | only read the EPC information from the tag.
- Tag - BANK TID⁽¹⁾ | Allow to only read the TID from the nearest tag.
- Tag - BANK DATA USER^{(1) (2)} | Allow to only read the user memory area from the nearest tag

⁽¹⁾ WARNING - This function can only be used in RFID SINGLE MODE

⁽²⁾ WARNING – when you read one tag without DATA USER, a reset of the embisScan is automatically done !

BARCODE MODE	BARCODE
EAN	 MODE_SIMPLE_EAN
SERIAL NUMBER ⁽¹⁾	 MODE_SIMPLE_SERIAL_NUMBER

TAG MODE	BARCODE
BANK EPC	 MODE_SIMPLE_EPC
BANK TID ⁽¹⁾	 MODE_SIMPLE_TID
BANK DATA USER ^{(1) (2)}	 MODE_SIMPLE_DATA_USER

⁽¹⁾ WARNING - This function can only be used in RFID SINGLE MODE

⁽²⁾ WARNING – when you read one tag without DATA USER, a reset of the embiScan is automatically done !

4.11 FULL mode

FULL mode give the possibility to read several informaiton in a tag. For that, you can select or unselect the required information (information that you want to read).

Informations are always return in the same way and order :

1. EPC
2. EAN
3. SN
4. TID
5. DATA USER

MODE	BARCODE
FULL EPC ON	 MODE_FULL_EPC_ON
FULL EPC OFF	 MODE_FULL_EPC_OFF

FULL EAN ON	 MODE_FULL_EAN_ON
FULL EAN OFF	 MODE_FULL_EAN_OFF
FULL SERIAL NUMBER ON	 MODE_FULL_SERIAL_NUMBER_ON
FULL SERIAL NUMBER OFF	 MODE_FULL_SERIAL_NUMBER_OFF
FULL TID ON ⁽¹⁾	 MODE_FULL_TID_ON
FULL TID OFF ⁽¹⁾	 MODE_FULL_TID_OFF
FULL DATA USER ON ^{(1) (2)}	 MODE_FULL_DATA_USER_ON
FULL DATA USER OFF ⁽¹⁾	 MODE_FULL_DATA_USER_OFF

⁽¹⁾ WARNING - This function can only be used in RFID SINGLE MODE

⁽²⁾ WARNING – when you read one tag without DATA USER, a reset of the embiScan is automatically done !

4.12 Configuration of the separator

Information are displayed on the PC screen and separated by a punctuation. The default settings to separate the words is a comma. But you can change it at any time with the following barcode :

FUNCTIONS	BARCODE
SEPARATOR COMMA ,	 MODE_FULL_SEP_VIRGULE
SEPARATOR SEMI-COLON ;	 MODE_FULL_SEP_POINT_VIRGULE
SEPARATOR SLASH /	 MODE_FULL_SEP_SLASH
SEPARATOR DOT .	 MODE_FULL_SEP_POINT

4.13 Configuration of the delay to scan

When you keep pushed the scan barcode button of the embiScan, there is a delay between two read (laser activation). This delay can be configured. Default settings is 400ms.

FUNCTIONS	BARCODE
SCAN DELAY 200 ms	 SCAN_DELAY_200ms
SCAN DELAY 400 ms	 SCAN_DELAY_400ms
SCAN DELAY 600 ms	 SCAN_DELAY_600ms
SCAN DELAY 800 ms	 SCAN_DELAY_800ms
SCAN DELAY 1s	 SCAN_DELAY_1s

4.14 Configuration of the power

You can modify the power to read a Tag in RFID single mode.

FUNCTIONS	BARCODE
MINIMUM POWER RFID SINGLE MODE	 MINIPOWER_RFID_SINGLE_USE
MIDDLE POWER RFID SINGLE MODE	 MIDDLEPOWER_RFID_SINGLE_USE
MAXIMUM POWER RFID SINGLE MODE	 MAXPOWER_RFID_SINGLE_USE

You can modify the power to read a Tag in RFID multiple mode.

FUNCTIONS	BARCODE
MINIMUM POWER RFID MULTIPLE	 MINIPOWER_RFID_MULTIPLE
MIDDLE POWER RFID MULTIPLE	 MIDDLEPOWER_RFID_MULTIPLE
MAXIMUM POWER RFID MULTIPLE	 MAXPOWER_RFID_MULTIPLE

4.15 Configure the GTIN

The EPC schema to encode a GTIN is the SGTIN which consists of the GTIN plus a unique product or serial number. The SGTIN scheme has different encodings like 64, 96, or 198 bits. The following barcode let you the possibility to configure the length of the GTIN that you used in conformity with the GS1 declaration.

FONCTIONS	BARCODE
GTIN 14	 EMBI_GTIN_14
GTIN 13	 EMBI_GTIN_13
GTIN 12	 EMBI_GTIN_12
GTIN 8	 EMBI_GTIN_8